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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/486,556	02/29/00	HASHIMOTO	N 105029
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MM91/0801

EXAMINER

PATEL, I

ART UNIT

PAPER NUMBER

2841

DATE MAILED:

08/01/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/486,556

Applicant(s)

HASHIMOTO, NOBUAKI

Examiner

Ishwar B Patel

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 21-24, 26, 28, & 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Osamu Miyata et al., U. S. Patent 6,204,564, here after referred to as Miyata.

Regarding claim 21, 28 and 29, Miyata discloses a semiconductor device comprising:

a semiconductor chip having electrodes (semiconductor chip 3 with electrode 30, see figure 23, column 15, line 56-67);

a substrate on which an interconnect pattern is formed (substrate 2 with wiring pattern 21, see figure 23, line 56-67);



a protective layer provided on said substrate excluding a region of said interconnect pattern of electrical connection with said electrodes of said semiconductor chip (alpha ray shielding insulation layer 25, see figure 23, column 15, line 56-67); and

an adhesive; wherein said adhesive is provided on said substrate from a region of mounting of said semiconductor chip to said protective layer; and wherein said electrode with said interconnect pattern (anisotropic conductive adhesive 5, see figure 23, column 13, line 1-40).

Regarding claim 22, Miyata further discloses conductive particle dispersed in said adhesive to form an anisotropic conductive material (anisotropic conductive adhesive 5 is based upon a thermosetting resin component 50 dispersed with ball-like conductive particles 51, see figure 23 and 9, column 11, line 55-67).

Regarding claim 23, Miyata further discloses said anisotropic conductive material provided to cover the whole of said interconnect pattern (anisotropic conductive adhesive 5 covering the pattern, see figure 23 and 9, column 11, line 55-67).

Regarding claim 24, Miyata further discloses the adhesive covers at least part of a lateral surface of said semiconductor chip (see figure 23).

Art Unit: 2841

Regarding claim 26, Miyata further discloses the said protective layer is provided to cover said substrate except a region of mounting of said semiconductor chip and the periphery of said mounting region (alpha ray shielding insulation coating 25, see figure 23, column 15, line 56 to column 16 line 25).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 25, 1-20 and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Osamu Miyata et al., U. S. Patent 6,204,564, here after referred to as Miyata as applied to claims 21-24 above.

Regarding claim 25, Miyata does not explicitly disclose the adhesive includes a shading material. However it is a matter of obvious design choice to have the shading material added to the adhesive material depending upon the required protection of the chip against the rays from the soldering. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Miyata with the shading material added to the adhesive in order to protect the chip from the rays during the soldering.

Regarding claims 1-20, the method is obvious in view of the product claims disclosed by the prior art of Miyata.

Regarding claim 27, eventhough the claims are limited by and defined by the recited process, the determination of patentability of the product is based on the product itself, and does not depend on its method of production. If the product in the product – by – process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miyata et al., Rai et al, Toyosawa et al., Hashimoto, Higashi et al., Tsukagoshi et al., Moriyama, Otani et al., Yoneda, Moriyama, Sohara, Tsukagohsi et al., Kunitomo et al, Omoya et al., Masamitsu Kishigami, Hiroyuki Isobe and JP2000357710 disclose the device similar to applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar B Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (6:30 - 4) First Friday Off.

Art Unit: 2841

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (703) 308 3301. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3431 for regular communications and (703) 305 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

ibp
July 27, 2001

A handwritten signature in black ink, appearing to be 'H. Gaffin', written in a cursive style.